Preface vii

Contents viii

Mean density approximation and hard-sphere expansion theory: a review
L.-J. Chen (Houston, TX, U.S.A.), J.F. Ely (Boulder, CO, U.S.A.) and
G.A. Mansoori (Chicago, IL, U.S.A.) 1- 27

Generalized van der Waals theory: a classical perspective
M.M. Abbot (Troy, NY, U.S.A.) and J.M. Prausnitz (Berkely, CA,
U.S.A.) 29- 62

Simple liquid mixtures under pressure and the van der Waals one-fluid
theory
S.F. Barreiros, H.J.R. Guedes and M. Nunes da Ponte (Lisbon, Portugal) 63- 71

Corresponding states correlation for the volumetric properties of
compressed liquids and liquid mixtures
Y.-H. Huang and J.P. O'Connell (Gainesville, FL, U.S.A.) 75- 84

Comparison of corresponding states methods with and without density
dependent mixing rules
D. Rosenthal, W. Tawfik and A.S. Teja (Atlanta, GA, U.S.A.) 85-104

Improved conformal solution theory for mixtures with large size ratios
M.L. Huber and J.F. Ely (Boulder, CO, U.S.A.) 105-121

Development of a field-space corresponding-states method for fluids and
fluid mixtures
J.R. Fox (Boulder, CO, U.S.A.) 123-140

Equation of state composition dependence
M.A. Khan, M.H. Li, L.L. Lee and K.E. Starling (Norman, OK, U.S.A.) 141-151

Vapor-liquid equilibrium calculations for the N_2-Ar-O_2 mixtures with
modified BWR equations of state and a corresponding states principle
S.-C. Hwang (Murray Hill, NJ, U.S.A.) 153-167

Preface vii

Contents viii

Mean density approximation and hard-sphere expansion theory: a review
L.-J. Chen (Houston, TX, U.S.A.), J.F. Ely (Boulder, CO, U.S.A.) and
G.A. Mansoori (Chicago, IL, U.S.A.) 1- 27

Generalized van der Waals theory: a classical perspective
M.M. Abbot (Troy, NY, U.S.A.) and J.M. Prausnitz (Berkely, CA,
U.S.A.) 29- 62

Simple liquid mixtures under pressure and the van der Waals one-fluid
theory
S.F. Barreiros, H.J.R. Guedes and M. Nunes da Ponte (Lisbon, Portugal) 63- 71

Corresponding states correlation for the volumetric properties of
compressed liquids and liquid mixtures
Y.-H. Huang and J.P. O'Connell (Gainesville, FL, U.S.A.) 75- 84

Comparison of corresponding states methods with and without density
dependent mixing rules
D. Rosenthal, W. Tawfik and A.S. Teja (Atlanta, GA, U.S.A.) 85-104

Improved conformal solution theory for mixtures with large size ratios
M.L. Huber and J.F. Ely (Boulder, CO, U.S.A.) 105-121

Development of a field-space corresponding-states method for fluids and
fluid mixtures
J.R. Fox (Boulder, CO, U.S.A.) 123-140

Equation of state composition dependence
M.A. Khan, M.H. Li, L.L. Lee and K.E. Starling (Norman, OK, U.S.A.) 141-151

Vapor-liquid equilibrium calculations for the N_2-Ar-O_2 mixtures with
modified BWR equations of state and a corresponding states principle
S.-C. Hwang (Murray Hill, NJ, U.S.A.) 153-167

An interim thermodynamic property formulation for air
R.T. Jacobsen, R.B. Stewart (Moscow, ID, U.S.A.), S.G. Penoncello (Grand Forks, ND, U.S.A.) and R.D. McCarty (Boulder, CO, U.S.A.) .. 169-184

A method for improving equations of state near the critical point
D.D. Erickson, T.W. Leland (Houston, TX, U.S.A.) and J.F. Ely (Boulder, CO, U.S.A.) 185-205

Simultaneous calculations of VLE and saturated liquid and vapor volumes by means of a 3P1T cubic EOS
J.-M. Yu, B.C.-Y. Lu and Y. Iwai (Ottawa, Canada) 207-222

New physical constraints for fluid mixture equations of state and mixture combining rules
M.A. Barrufet and P.T. Eubank (College Station, TX, U.S.A.) 223-240

A comparative study of mixing rules for cubic equations of state
G. Wilczek-Vera and J.H. Vera (Montreal, Que., Canada) 241-253

Variational theory of mixtures
E.Z. Hamad and G.A. Mansoori (Chicago, IL, U.S.A.) 255-285

Simplified GMSA for Yukawa mixtures
E. Arrieta, C. Jedrzejek and K.N. Marsh (College Station, TX, U.S.A.) 287-292

Determination of excess Gibbs free energy from computer simulation: multiple-parameter charging approach
A.A. Chialvo and J.M. Haile (Clemson, SC, U.S.A.) 293-303

A computer simulation study of fluid ammonia
K.A. Mansour and S. Murad (Chicago, IL, U.S.A.) 305-326

Local composition of square-well molecules of diverse energies and sizes
R.J. Lee and K.C. Chao (West Lafayette, IN, U.S.A.) 327-336

Author Index 337